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| 09/851,740 | 05/09/2001 | Donald L. Schilling | I-2-55.4US | 4186 |

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VOLPE AND KOENIG, P.C.
DEPT. ICC
UNITED PLAZA, SUITE 1600
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

| EXAMINER | |
|---|---|
| BOAKYE, ALEXANDER O | |
| **ART UNIT** | **PAPER NUMBER** |
| 2667 | |

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 09/851,740 | Applicant(s) SCHILLING ET AL. | |
|---|---|---|---|
| | Examiner ALEXANDER BOAKYE | Art Unit 2667 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *09 May 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5 and 7-9* is/are rejected.

7)☒ Claim(s) *2-4,6,10,11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4, 7 and 8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 18 and 21 of U.S. Patent No.5,363,403. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claim subtracting from the spread-spectrum CDMA signal, each of the N-1 spread-spectrum-processed-despread signals, with the N-1 spread-spectrum-processed-despread signals not including a spread-spectrum processed despread signal of the $i^{th}$ despread signal, thereby generating a subtracted signal with the only difference between the claims of the instant invention and the claims of the patent being that the claims of the instant invention are broader than the claims of the patent. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the

claims of the patent for the benefit of reducing interference in the communications systems.

Claims 5-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,363,403. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claim means for subtracting from the spread-spectrum CDMA signal, each of the N-1 spread-spectrum-processed-despread signals, with the N-1 spread-spectrum-processed-despread signals not including a spread-spectrum processed despread signal of the $i^{th}$ despread signal, thereby generating a subtracted signal with the only difference between the claims of the instant invention and the claim of the patent being that the claims of the instant invention are broader than the claim of the patent. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 9-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 24 of U.S. Patent No.5,363,403. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claim a plurality of subtractors, each of the plurality of subtractors for subtracting from the spread-spectrum CDMA signal all but a particular one of the N spread-spectrum-processed-despread signals being different for each of the plurality of subtractors, thereby generating a plurality of subtracted signals with the only difference between the claims of the instant invention and the claim of the

patent being that the claims of the instant invention are broader than the claim of the patent. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 1-4, 7 and 8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 18 of U.S. Patent No. 5,553,062. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claim subtracting from the spread-spectrum CDMA signal, each of a plurality of N-1 spread-spectrum-processed-despread signals, with the plurality of N-1 spread-spectrum-processed signals not including a spread-spectrum processed despread signal of an $l^{th}$ despread signal, thereby generating a subtracted signal ; dispreading the subtracted signal with the only difference between the claim of the instant invention and the claim of the patent being that the claim of the instant invention is broader than the claim of the patent. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 5-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No.5,553,062. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application means for subtracting from the spread-spectrum CDMA signal, each of the N-1 plurality of spread-spectrum-processed-despread signals,

with the N-1 plurality of spread-spectrum-processed-despread signals not including the $l^{th}$ spread-spectrum processed despread signal of an $i^{th}$ despread signal, thereby generating a subtracted signal with the only difference between the claims of the instant invention and the claim of the patent being that the claim of the instant invention is broader than the claim of the patent. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 9-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 19 of U.S. Patent No.5,553,062. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application claim a subtractor for subtracting from the spread-spectrum CDMA signal all but a particular one of the N spread-spectrum-processed-despread signals, thereby generating a plurality of subtracted signals and dispreading the plurality of subtracted signal with the only difference between the claims of the instant invention and the claim of the patent being that the claim of the instant invention id broader than the claim of the patent. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 1-4, 7 and 8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent

No 5,719,852. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application claim a subtractor for subtracting from the spread-

subtracting from the spread-spectrum CDMA signal, each of the N-1 spread-spectrum-processed-despread signals, with the plurality of N-1 spread-spectrum-processed-despread signals not including a spread-spectrum processed despread signal of an $i^{th}$ despread signal, thereby generating a subtracted signal; dispreading the subtracted signal with the only difference between the claim of the instant invention and the claim of the patent being that the claim of the instant invention is broader than the claim of the patent. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 5-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No 5,719,852. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application claim subtracting from the spread-spectrum CDMA signal, each of a plurality of N-1 spread spectrum-processed- despread signals, with the plurality of N-1 spread spectrum processed despread signal of $l^{th}$ despread signal, thereby generating a subtracted signal; dispreading the subtracted signal with the only difference between the claim of the instant invention and the claim of the patent being that the claim of the instant invention is broader than the claim of the patent and also the preamble of the claim of the instant invention is an apparatus while the preamble of

the claim of the patent is a method. One of ordinary skill in the art would have been motivated to implement an apparatus as the preamble for the claim of the instant invention since apparatus operates using a method. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 9-11are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No 5,719,852. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application claim subtracting from the spread-spectrum CDMA signal, each of a plurality of AN-1 spread-spectrum-processed despread signals, with the plurality of N-1 spread-spectrum-processed-despread signals not including a spread-spectrum processed despread signal of an $l^{th}$ despread signal, thereby generating a subtracted signal; dispreading the subtracted signal with the only difference between the claim of the instant invention and the claim of the patent being that the claim of the instant invention is broader that the claim of the patent and also the preamble of the claim of the instant invent is an apparatus while the preamble of the claim of the patent is a method. One of ordinary skill in the art would have been obvious to implement an apparatus as the preamble for the claim of the instant invention since apparatus operates using a method. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant

application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 1-4, 7 and 8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 16 of U.S. Patent 6,014,373. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application claim subtracting all but a selected one of the plurality of processed signals to produce a subtracted signal with the only difference between the claim of the instant invention and the claim of the patent being that the claim of the instant invention is broader than the claim of the patent. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 5-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 5 of U.S. Patent 6,014,373. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application claim a subtracting means having inputs associated with all but a selected processing means for outputting a subtracted signal with the only difference between the claim of the instant invention and the claim of the patent being that the claim of the instant invention id broader than the claim of the patent. Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

Claims 9-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 16 of U.S. Patent 6,014,373. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application claim subtracting all but a selected one of the plurality of processed signals to produce a subtracted signal with the only difference between the claim of the instant invention and the claim of the patent being that the claim of the instant invention is broader than the claim of the patent and also the preamble of the claim of the instant invention is an apparatus while the preamble of the claim of the patent is a method. One of ordinary skill in the art would have been motivated to implement an apparatus as a preamble of the claim of the instant invention Therefore, it would have been obvious to one of ordinary skill in the art to implement the invention of the instant application using the claims of the patent for the benefit of reducing interference in the communications systems.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7 (line1) the limitation "The receiver" lacks antecedent basis.

In claim 8 (line 1) the limitation "The receiver" lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Zeger et al. (US Patent # 5, 099,493).

Regarding claim 1, Zeger discloses a method for recovering data transmitted over a plurality of channels in a wireless code division multiple access communication system (Fig. 1), the method comprising: receiving the plurality of channels as a received signal, each channel associated with a code (receiver front end circuits receive a composite CDMA signals from an antenna as shown in Fig. 1; column 2, lines 60-62 ); subtracting for each of the plurality of channels others of the plurality of channels from the received signal (column 2, lines 57-60) and dispreading a result of that subtracting as data for that channel (see lines 15-19 of the abstract ; dispreading is performed by the mixer block 24 of Fig. 2 after subtracting).

Regarding claim 5, Zeger discloses a receiver for recovering data transmitter over a plurality of channels in a wireless code division multiple access communication system, the receiver (see Fig. 1) comprising: means for receiving the plurality of channels as a received signal, each channel associated with a code (column 2, lines 60-62; the receiver front end circuits receive a composite CDMA signals from an antenna in Fig. 1); means for subtracting for each of the plurality of channels, others of

the plurality of channels from the received signal (column 2, lines 57-60 )and dispreading a result of that subtracting as data for that channel (see lines 15-19 of the abstract; dispreading is performed by the mixer block 24 of Fig. 2 after subtracting).

Regarding claim 9, Zegler discloses a receiver for recovering data transmitter over a plurality of channels in a wireless code division multiple access communication system, the receiver (see Fig. 1) comprising: an input configured to receive the plurality of channels as received signal, each channel associated with a code (the claimed input corresponds to antenna of Fig. 1); and for each of the plurality of channels, a subtractor for subtracting others of the plurality of channels from the received signal ( column 2, lines 57-60; see block 3 of Fig. 1) and dispreading a result of that subtracting as data for that channel(see lines 15-19 of the abstract; dispreading is performed by the mixer block 24 of Fig. 2 after subtracting).

***Allowable Subject Matter***

4. Claims 2-4, 6, 10 and 11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 7 and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (703) 308-9554. The examiner can normally be reached on M-F from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (703) 305-4378. The fax number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-4750.

Alexander Boakye

Patent Examiner

7/10/04

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 7/20/04